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Demyelinating Disorders 3
Relapse rates and work productivity among patients receiving disease modifying therapy (dmt) for multiple sclerosis (ms)

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Background: Real-world studies suggest that natalizumab results in lower relapse rate versus other MS DMTs and improves work productivity.
Objective: To compare relapse rates and work productivity using Work Productivity and Impairment (WPAI) questionnaire between MS patients treated by platform therapies, oral therapies or natalizumab.
Methods: RRMS patients receiving natalizumab, platform or oral therapies for greater than 12 months were identified from the 2015 Adelphi MS Disease Specific Programme, a global (U.S., U.K., Spain, Italy, France and Germany) cross-sectional study that obtained patient consent/approval. Average treatment effects (ATEs) for 1113 patients (156 natalizumab, 711 platform, 246 oral) were estimated and adjusted utilizing a propensity score generated from age, gender, EDSS score at current treatment initiation, line-of-therapy, BMI, duration of current treatment, time since MS diagnosis, and number of comorbid conditions. Physician-reported relapses in the previous 12 months and work productivity were compared across treatments.
Results: Relapse and WPAI data were available for 934 (122 natalizumab, 617 platform, 195 oral) and 222 (34 natalizumab, 137 platform, 51 oral) patients, respectively. Natalizumab patients suffered fewer relapses than platform (ATE = −0.21 vs. 0.48, $p = 0.020$) and oral therapy patients (ATE = −0.14 vs. 0.45, $p = 0.075$). Patients receiving natalizumab reported significantly less presenteeism, i.e., attending work while sick) than those receiving platform (ATE = −10.16% vs. 19.26%, $p = 0.001$) or oral therapies (ATE = −8.28% vs. 22.65%, $p = 0.0018$). Treatment was not associated with less overall work impairment.
Conclusion: Treatment with natalizumab compared to platform or oral therapies was associated with a lower relapse rate and a significant reduction in impairment at work or presenteeism.

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Demyelinating Disorders 3
Epidemiology of multiple sclerosis in Brazil

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Background: Multiple Sclerosis (MS) is an autoimmune chronic disease, characterized by demyelinating of central nervous system. Local studies showed a prevalence around 12.5 to 27.2/100,000 habitants, and literature has evidenced it to be more common in women (71.4% to 76.8%) and Caucasians (77% to 85.7%), both between 35.4 and 37.3 years.
Objectives: Analyze the epidemiology of MS in Brazil, the shape of distribution through federal unities (FU) and compare the prevalence in men and women.
Materials and methods: We used secondary information of hospital admissions from DATASUS, since 2008 to 2012, in a form of quotient: number of admissions over FU's population, multiplied by 100,000, in each year, for both genders.
Results: It was observed a rise of prevalence in the direction North–South. Rio Grande do Sul, alternating with Santa Catarina and Distrito Federal that presented the highest rate (0.9 higher than the national rate, which showed the biggest values in 2011). The lowest numbers were found in Alagoas and Paraíba. The major prevalence occurred in women, about 2.23 times the value of the men, according to the local studies aforementioned, with 95% of reliability.
Conclusion: From 2008 to 2012, there was a national increase in the prevalence, and an association between the genetic and the concentration of Caucasians was noticed, which may justify the rate at South region, although the link with women is not understood yet.

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Demyelinating Disorders 3
Multiple sclerosis and peripheral nerve demyelination

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Objective: There are a number of case reports describing multiple sclerosis (MS) patients associated with demyelinating neuropathy, but its frequency in the whole MS population is unknown. In a study published in 2008, nerve conduction abnormalities suggestive of demyelinating neuropathy were found in 3 of the consecutive 60 relapsing remitting MS (RRMS) patients.
Methods: We present a 40 year old female diagnosed with RRMS 10 years ago. She had been using copaxone for the last 8 years with favorable prognosis. Even though she had discontinued the drug due to pregnancies she did not experience any attack following the birth of two children. As she started complaining of paresthesias in the lower extremities, she was evaluated with nerve conduction studies revealing severe sensory motor neuropathy. Investigations for a cause of neuropathy revealed no abnormal findings. As her complaints persisted along with worsening of ENG findings, sural nerve biopsy was performed revealing severe denervating neuropathy along with reinnervation, and findings suggestive of tomaculous neuropathy. She was questioned again to rule out a hereditary neuropathy, but she denied any family members to have similar complaints. Genetic analysis revealed deletion on chromosome 17p11.2-12. Her neurologic examination did not worsen in the following 1.5 years, and paresthesias improved following administration of pregabalin.
Conclusion: Approximately 5% of MS patients develop demyelinating neuropathy. The association could result from a common pathogenesis possibly due to epitope spreading during the long course of MS. Association of chronic inflammatory demyelinating polyneuropathy with MS is not frequent, but needs to be recognized as a treatable condition.

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